

### **SRC-101** **(Option for C8)**

#### **⚠ Warning**

The technical information and parts shown in this manual are not to be used for: the development, design, production, storage or use of nuclear, chemical, biological or missile weapons or other weapons of mass destruction; or military purposes; or purposes that endanger global safety and peace. Moreover, do not sell, give, or export these items, or grant permission for use to parties with such objectives. Forward all inquiries to Hitachi Ltd.

This Smoke Resistant Case is effective in suppressing lowering of luminance due to smoke and dust.

#### **Applicable Models**

- CP- X870W
- CP- X880W
- CP- X885W

#### **Caution**

Be sure to read this manual before servicing. To assure safety from fire, electric shock, injury, harmful radiation and materials, various measures are provided in this Smoke Resistant Case. Be sure to read cautionary items described in the manual to maintain safety before servicing.

#### **Service Warning (SRC-101 AND LCD PROJECTOR)**

1. When replace the lamp, to avoid burns to your fingers. The lamp becomes too hot.
2. Never touch the lamp bulb with a finger or anything else. Never drop it or give it a shock. They may cause bursting of the bulb.
3. This projector is provided with a high voltage circuit for the lamp. Do not touch the electric parts of power unit (main), when turn on the projector.
4. Do not touch the exhaust fan, during operation.
5. The LCD module assembly is likely to be damaged. If replacing to the LCD LENS/PRISM assembly, do not hold the FPC of the LCD module assembly.
6. Use the cables which are included with the projector or specified.

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**SPECIFICATIONS AND PARTS ARE SUBJECT TO CHANGE FOR IMPROVEMENT.**

## **Multimedia LCD Projector (Smoke Resistant Case)**

**April 2004** Digital Media Division

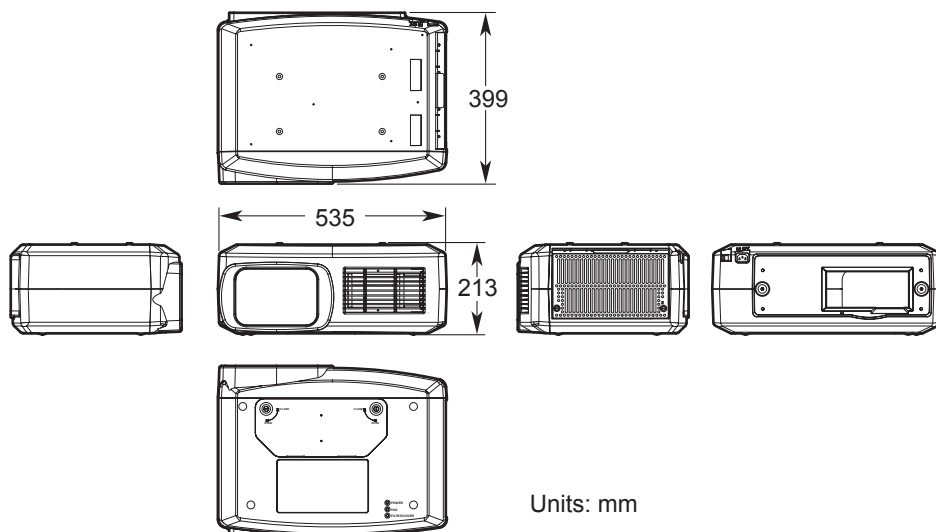
## 1. Features

- **HIGH DUST REMOVAL**

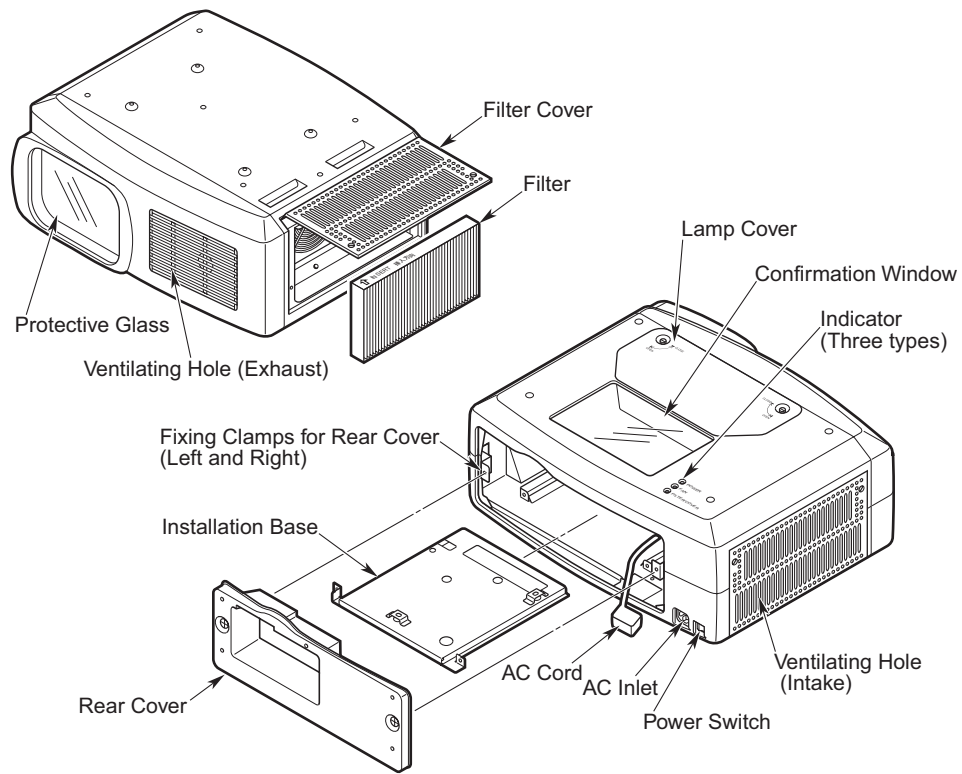
The filter employs highly effective dust removal material. This therefore gives superior dust collection effects over long periods of time.

## 2. Specifications

ITEM	SPECIFICATION
Product Name	Smoke Resistant Case
Product Number	SRC-101
Compatible Liquid Crystal Projector	CP-X870W, CP-X880W, CP-X885W
Air Cleaning Efficiency	99% (initial value) (Fan-Filter System)
Air Flow	Approximately 0.9m <sup>3</sup> /min
Indicator Display	POWER, FAN, FILTER/COVER
Power Supply	AC100V-120V, 5.1A/AC220V-240V, 2.2A
Power Consumption	17W (Not including Liquid Crystal Projector) 290W (Including CP-X870W) 450W (Including CP-X880W or CP-X885W)
Operating temperature range	0 to 35 degrees centigrade (indoors)
External Dimensions	535 (W) x 213 (H) x 399 (D) mm (Not including projecting parts)
Weight	Approximately 10kg (Not including liquid crystal projector)
Accessories	<ul style="list-style-type: none"> <li>• Smoke filter for exchange : SF-101</li> <li>• For Liquid crystal projector : Fixed screw (M4) × 3</li> <li>• User's manual, Installation manual</li> <li>• Lens cover</li> </ul>



### 3. Names of each part



## 4. Regarding the indicator lamp

Illumination of the POWER indicator, FAN indicator, and FILTER/COVER indicator indicates the following.

POWER indicator	FAN indicator	FILTER/COVER indicator	Supply to a FAN	Supply to a Projector	DESCRIPTIONS
Green Light	Turned off	Turned off	○	○	It is normal.
Turned off	Turned off	Turned off	×	×	The internal power source is malfunctioning. The DC power output is probably not reaching the stipulated voltage. (Refer to Page 7.)
Green Light	Red Light	Turned off	×	×	The cooling fan is not operating. Turn off the power and wait for twenty minutes and the unit and the Liquid Crystal Projector will cool down. Confirm that the temperature has fallen. After this, check to ensure that nothing has got caught up in the cooling fan, etc. After checking, turn the power back on so as to put the unit back to how it was and contact your local dealer.
Green Light	Turned off	Red Light	×	×	The filter is not yet installed or the filter cover or lamp cover is open. (This light will illuminate even if just one of these occurrences takes place.) Turn off the power and wait for twenty minutes and the unit and the Liquid Crystal Projector will cool down. Confirm that the temperature has fallen. Then please check carefully. After checking, turn the power back on so as to bring the unit back to the same condition and contact your local dealer.

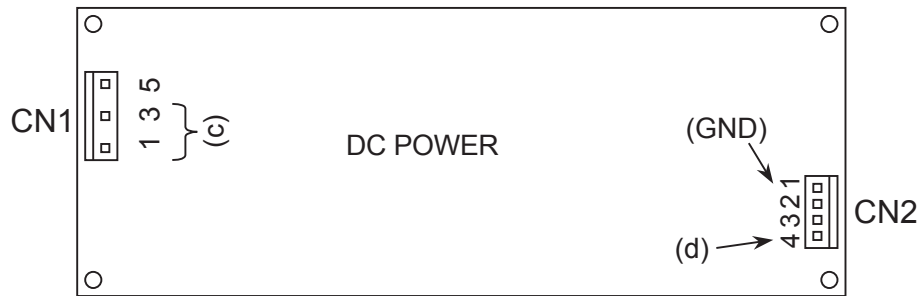
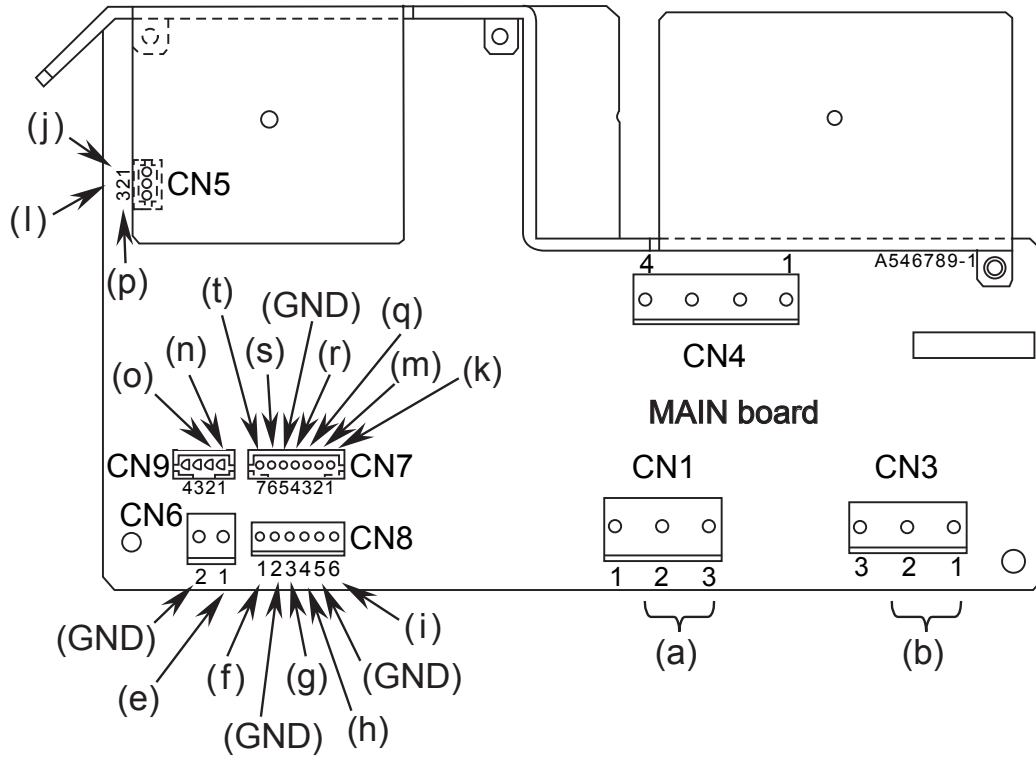
### NOTE

Please refer to the Liquid Crystal Projector USER'S MANUAL and change the lamp with regards to indicator lamps and messages for the Liquid Crystal Projector.

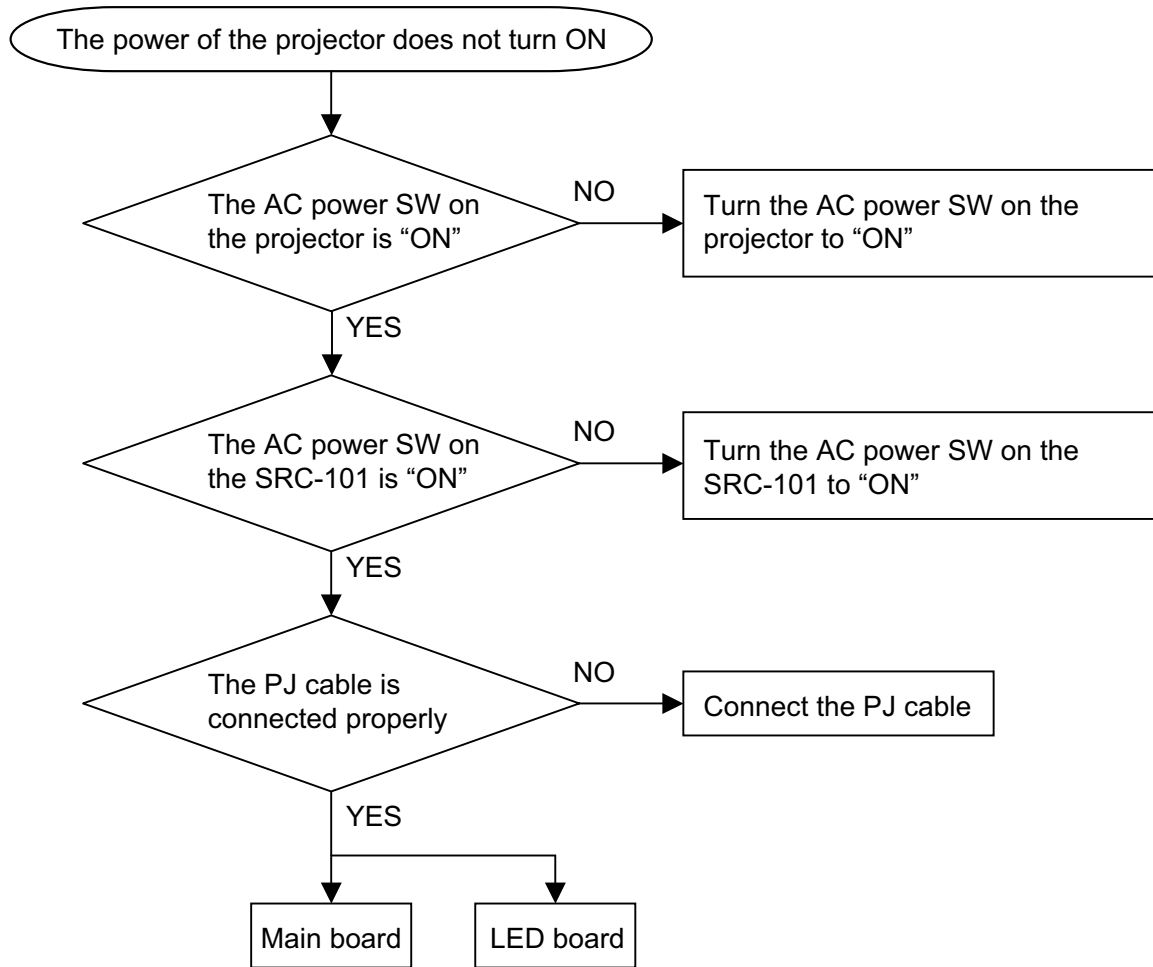
However, if the LAMP indicator and the Temp indicator flash red at the same time, or a display such as "Please clean the air filter" is displayed when the power is turned on, please refer to the document "FILTER MAINTENANCE".

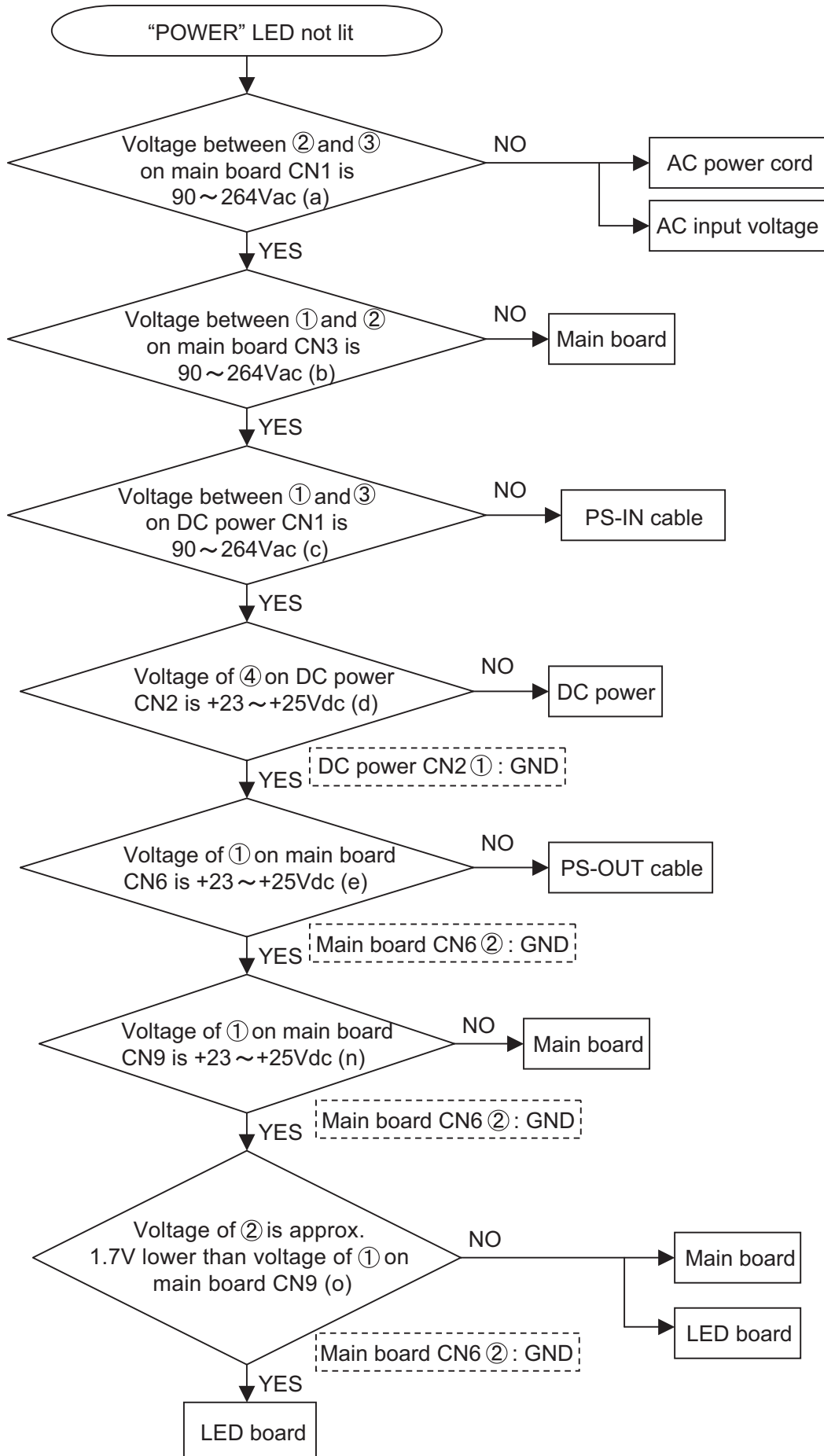
## 5. Troubleshooting

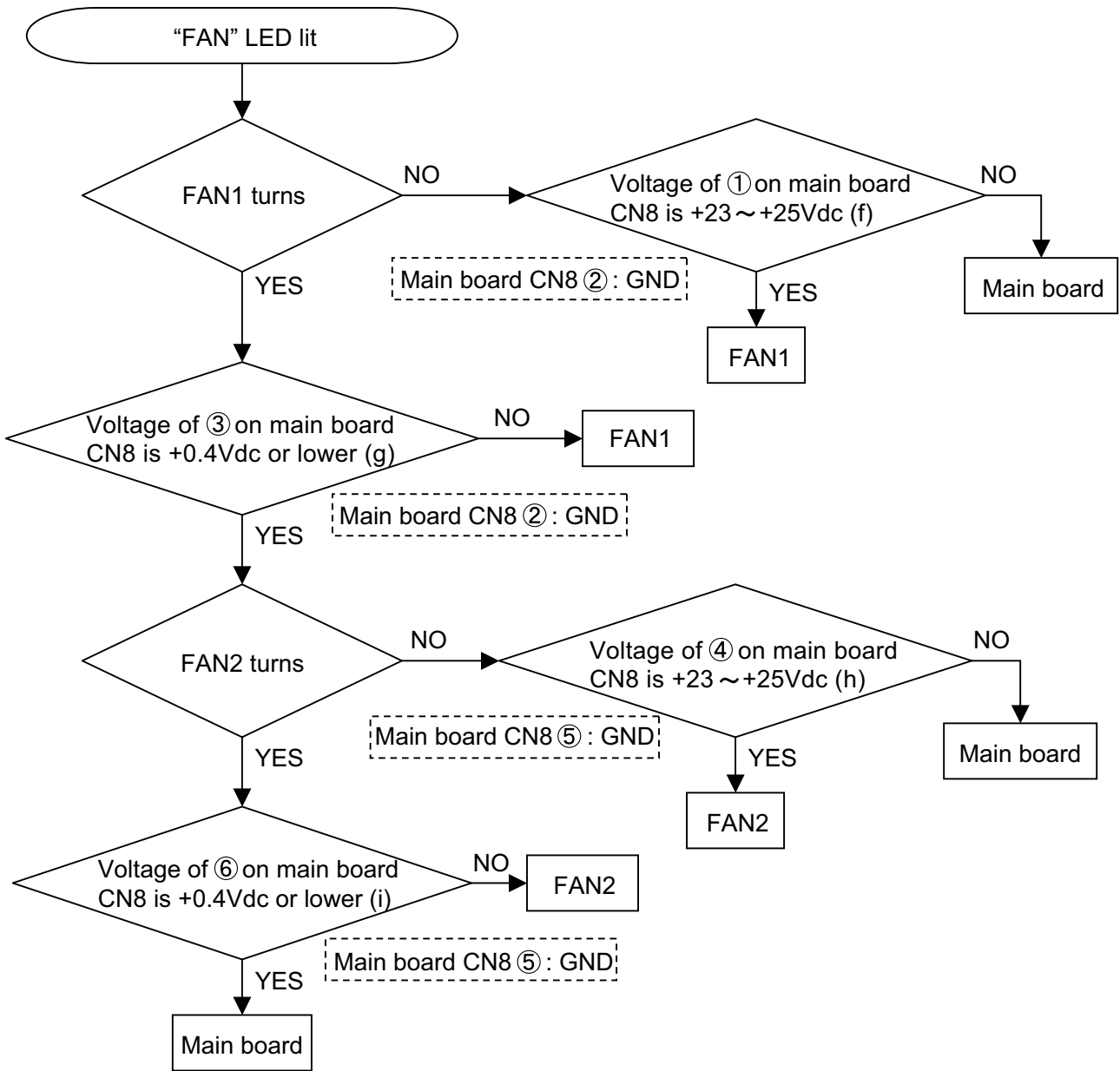
### Check points



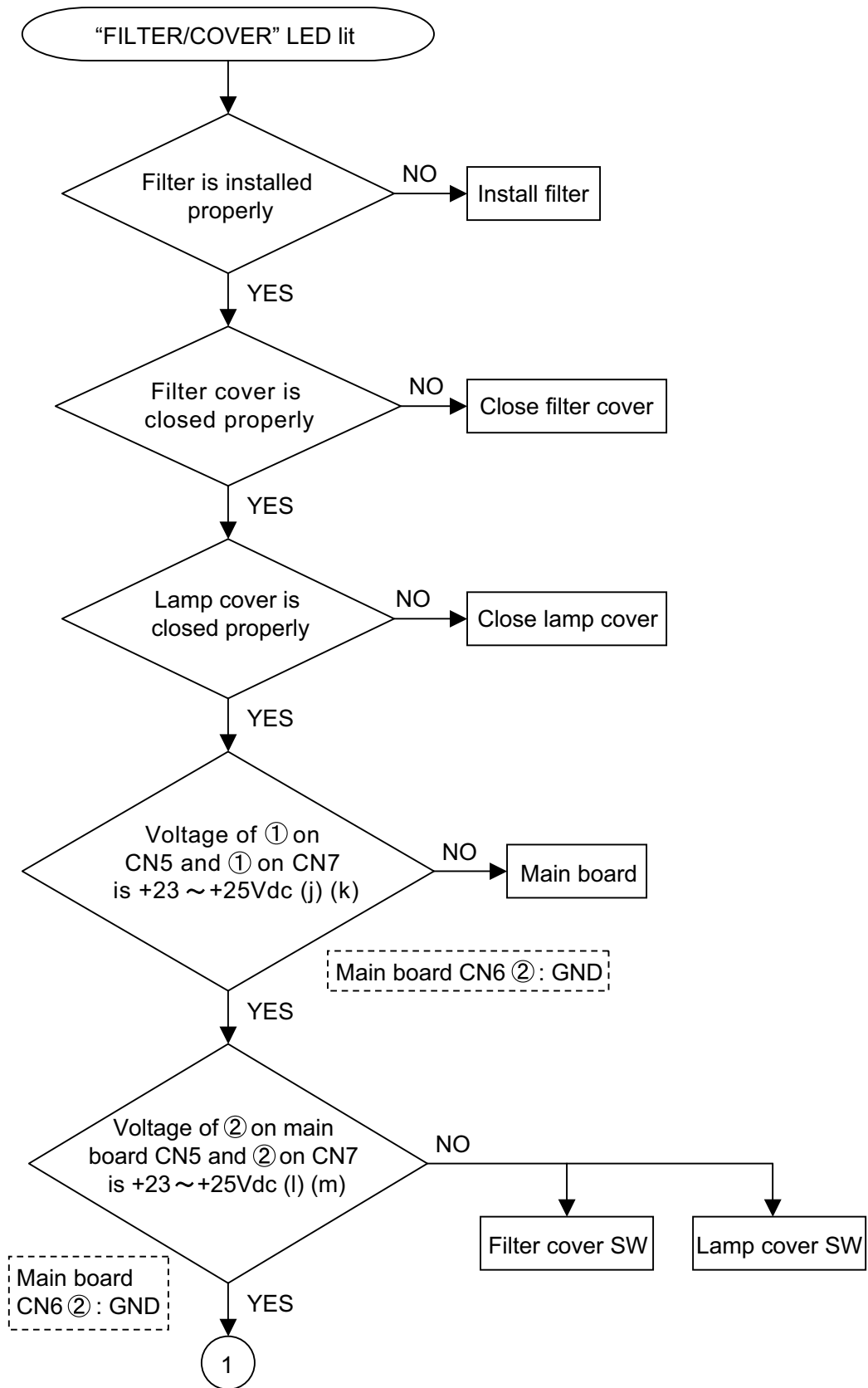
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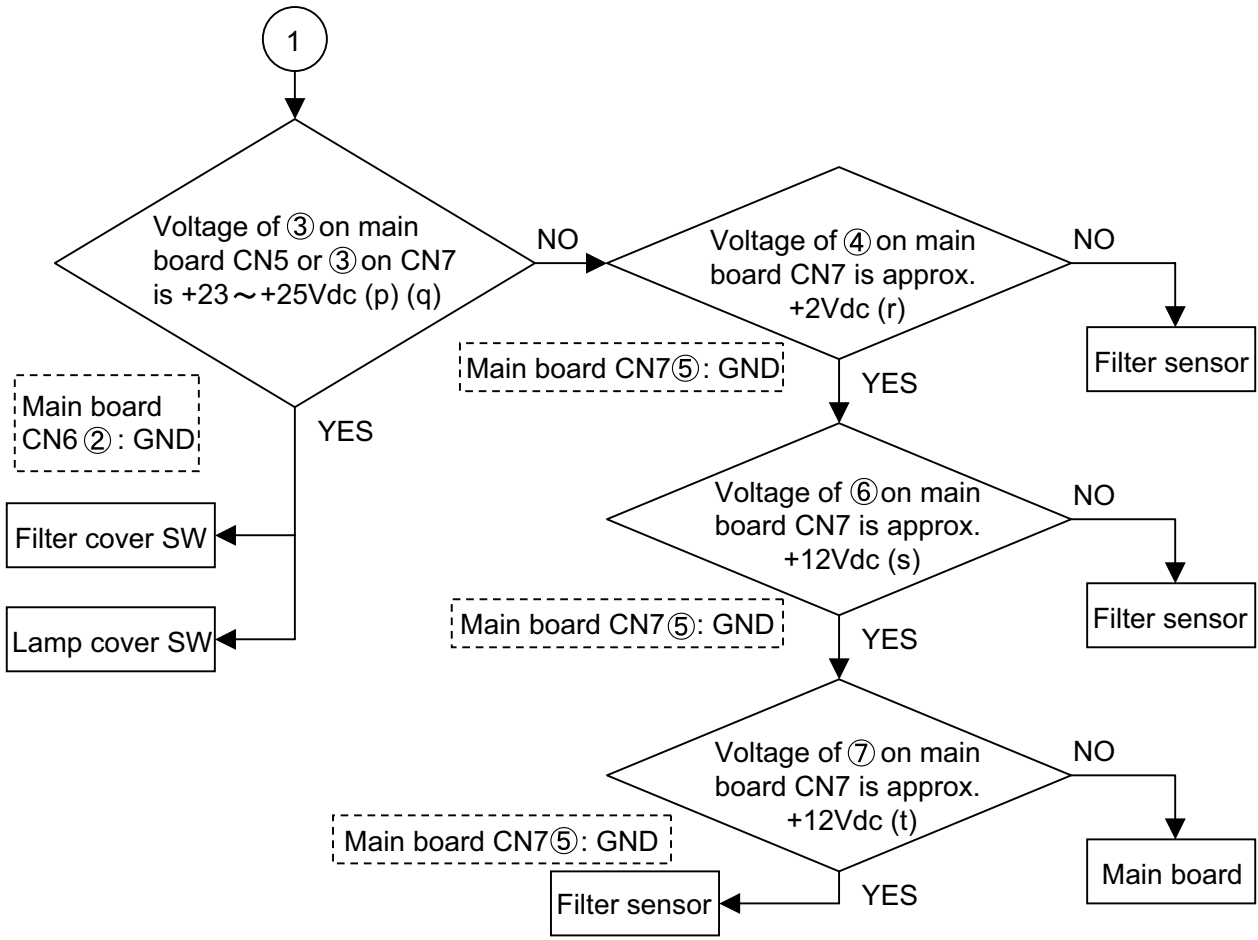












## 6. Lead free solder

This product uses lead free solder (unleaded) to help preserve the environment. Please read these instructions before attempting any soldering work.

### CAUTION

Always wear safety glasses to prevent fumes or molten solder from getting into the eyes. Lead free solder can splatter at high temperatures (600°C).

#### ■ Properties of lead free solder

The melting point of lead free solder is 40-50°C higher than leaded solder.

#### ■ Servicing solder

Solder with an alloy composition of Sn-3.0Ag-0.5Cu or Sn-0.7Cu is recommended.

Although servicing with leaded solder is possible, there are a few precautions that have to be taken. (Not taking these precautions may cause the solder to not harden properly, and lead to consequent malfunctions.)

#### Precautions when using leaded solder

- Remove all lead free solder from soldered joints when replacing components.
- If leaded solder should be added to existing lead free joints, mix in the leaded solder thoroughly after the lead free solder has been completely melted (do not apply the soldering iron without solder).

#### ■ Servicing soldering iron

A soldering iron with a temperature setting capability (temperature control function) is recommended.

The melting point of lead free solder is higher than leaded solder. Use a soldering iron that maintains a high stable temperature (large heat capacity), and that allows temperature adjustment according to the part being serviced, to avoid poor servicing performance.

#### Recommended soldering iron:

- Soldering iron with temperature control function (temperature range: 320-450°C)



Recommended temperature range per part:

Part	Soldering iron temperature
Mounting (chips) on mounted PCB	320°C±30°C
Mounting (chips) on empty PCB	380°C±30°C
Chassis, metallic shield, etc.	420°C±30°C

#### The PWB assembly which has used lead free solder

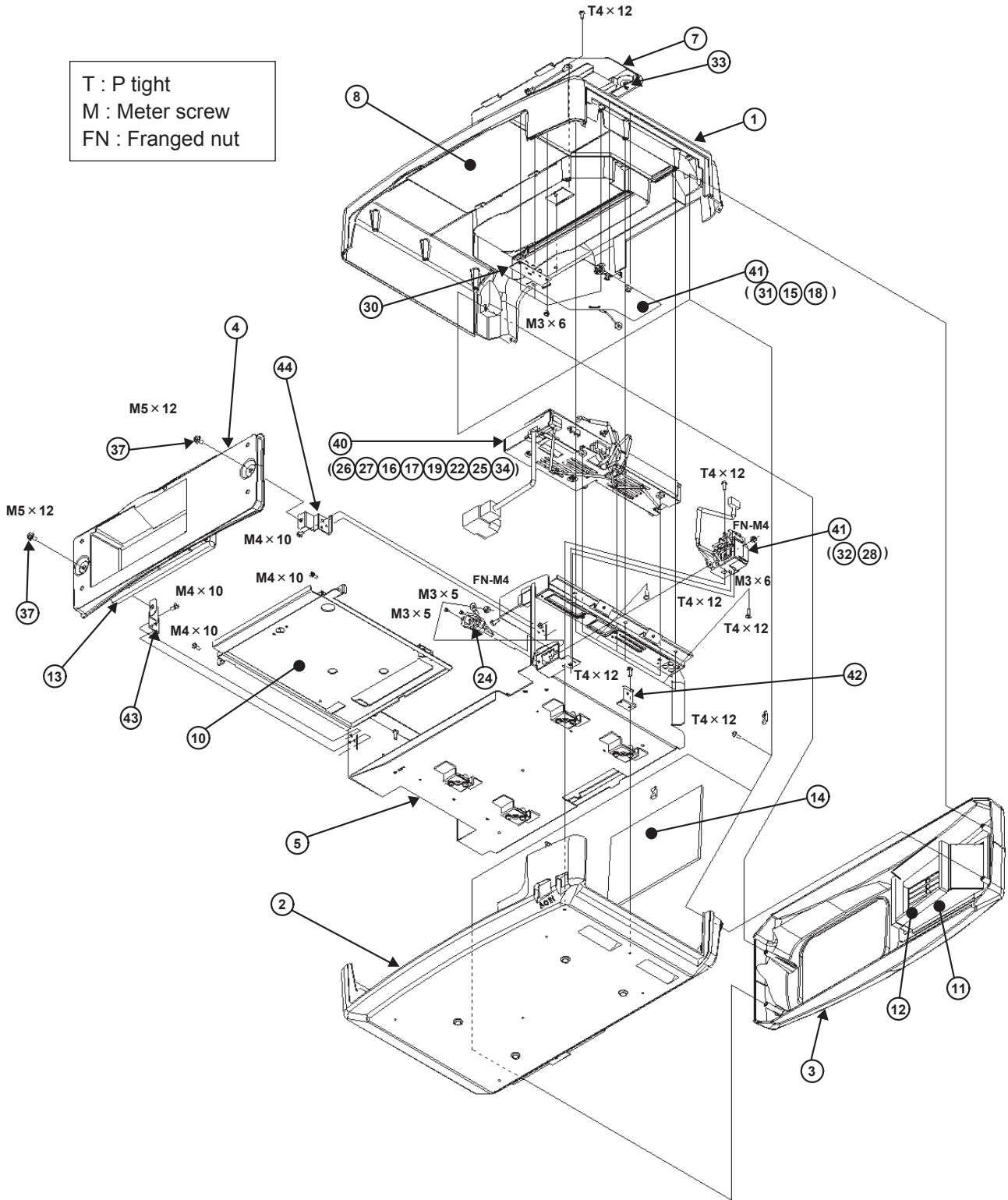
- ① MAIN board
- ② LED board
- ③ SENSOR board

**7. Parts list**

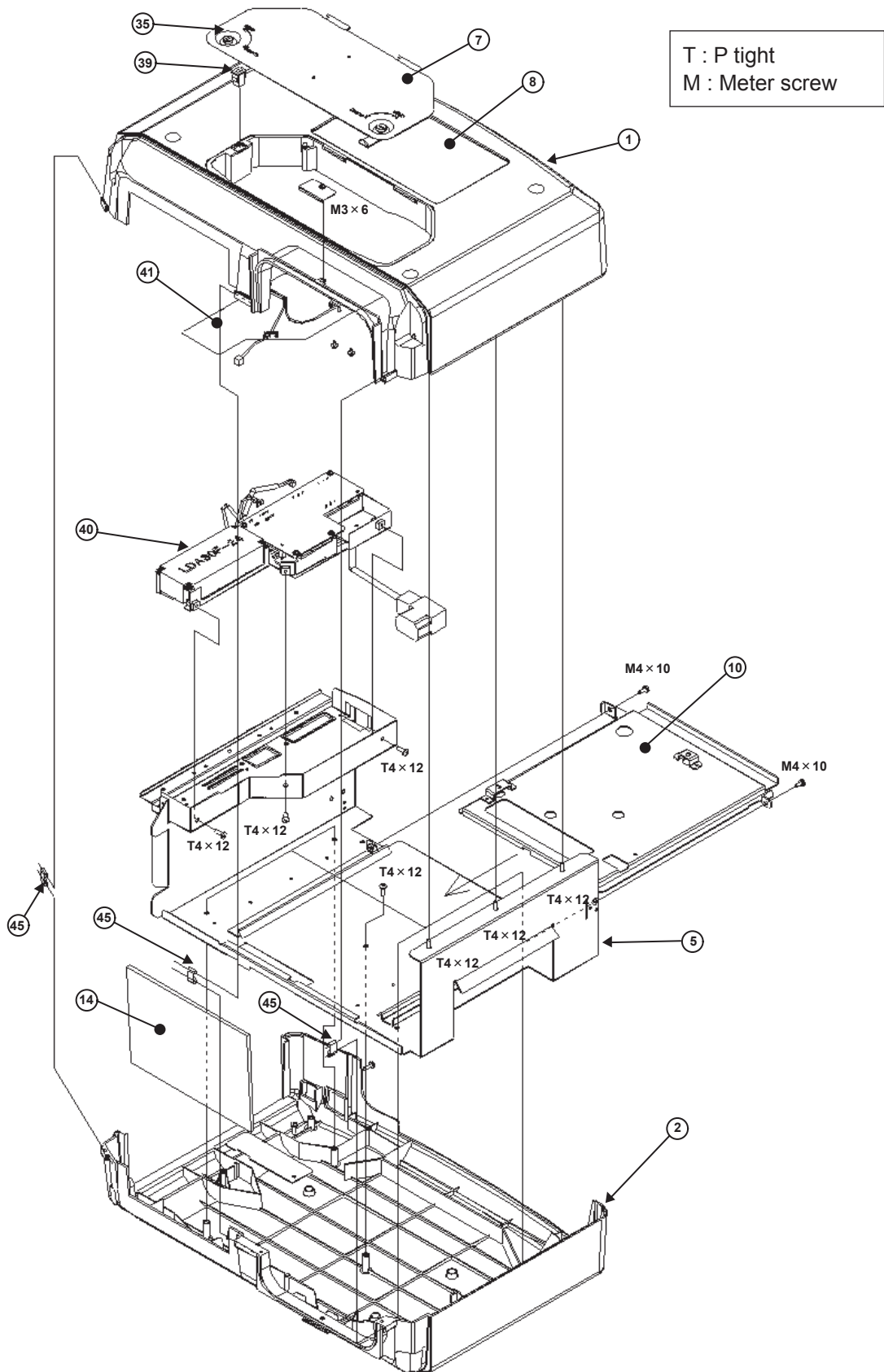
No.	Parts name	No.	Parts name
1	Upper cover	31	Guard(lead protection) Form: 
2	Under cover	32	Ferrite core
3	Front cover	33	Lamp cover tab
4	Back cover	34	Projector cable
5	Flame	35	Knob(lamp cover)
6	Filter case assembly	36	Knob(F cover)
7	Lamp cover	37	Fixing screw(back)
8	Indicator display	38	Filter cover SW
9-1	FAN1(connector:white)	39	Lamp cover SW
9-2	FAN2(connector:black)	40	Main board assembly
10	Projector pedestal	41	Upper lead assembly
11	Exhaust duct	42	Filter case bracket
12	Cushion(exhaust)	43	Back cover bracket A
13	Cushion(back cover)	44	Back cover bracket B
14	Front glass	45	Front fook
15	LED cable	46	Filter
16	PS-IN cable	47	F cover mount bracket A
17	PS-OUT cable	48	F cover mount bracket B
18	Lamp cover cable	49	Fan guard
19	Filter sensor SW cable	50	Rerolution axis for F cover
20	Filter cover SW cable	51	Bracket for board
21	Filter sensor cable		
22	FAN cable		
23	AC-SW assembly		
24	Inlet assembly		
25	LED,lamp cover SW cable assembly		
26	Main board		
27	DC Power		
28	Guard(lead) Form: 		
29	Sensor board		
30	LED board		

### 8. Disassembly diagram

T : P tight  
 M : Meter screw  
 FN : Franged nut

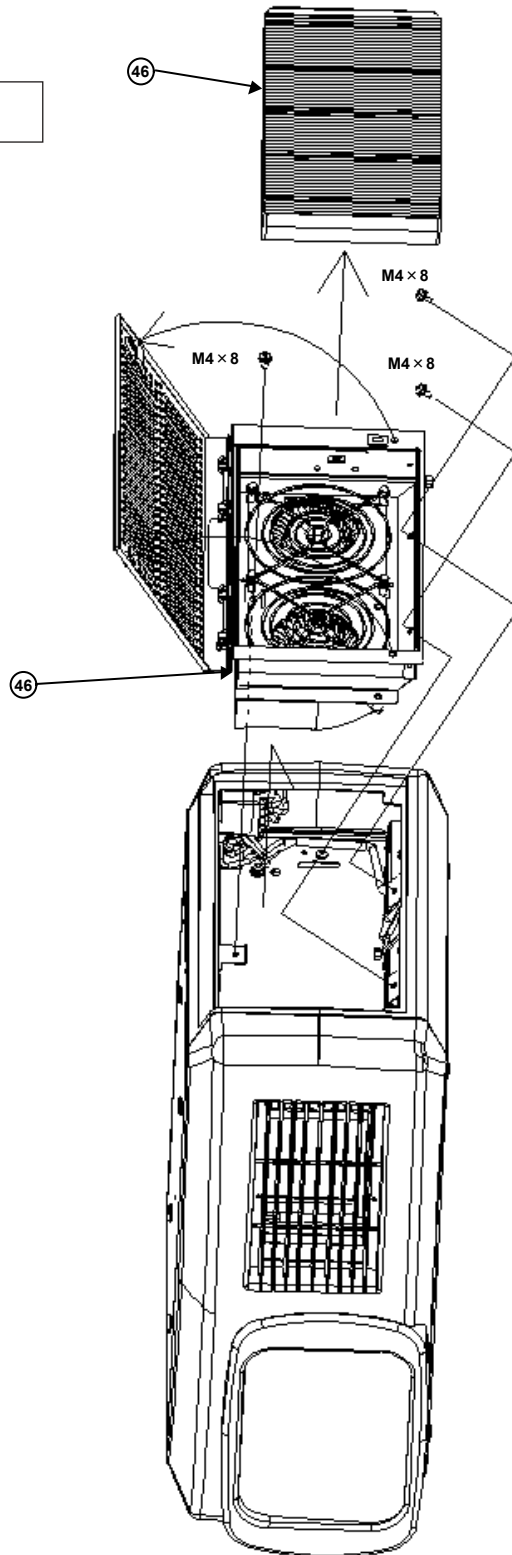


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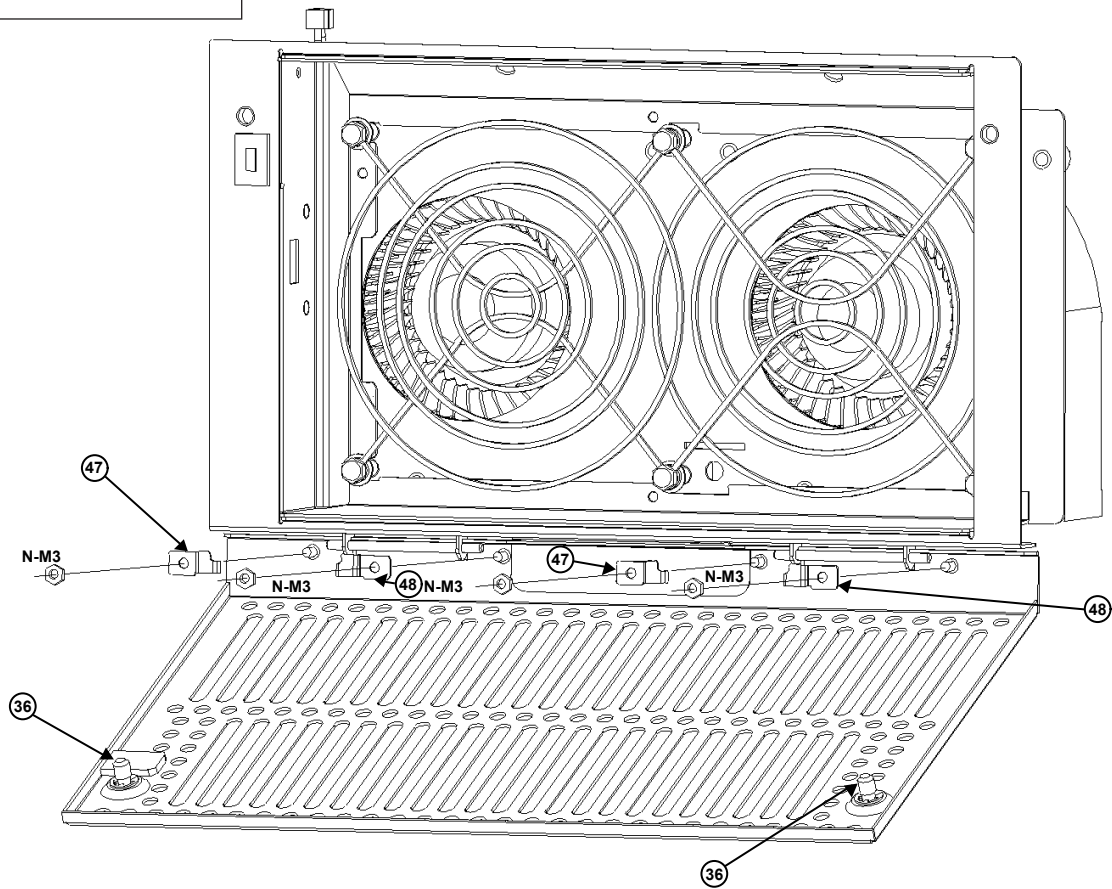
# SRC-101

M : Meter screw



# SRC-101

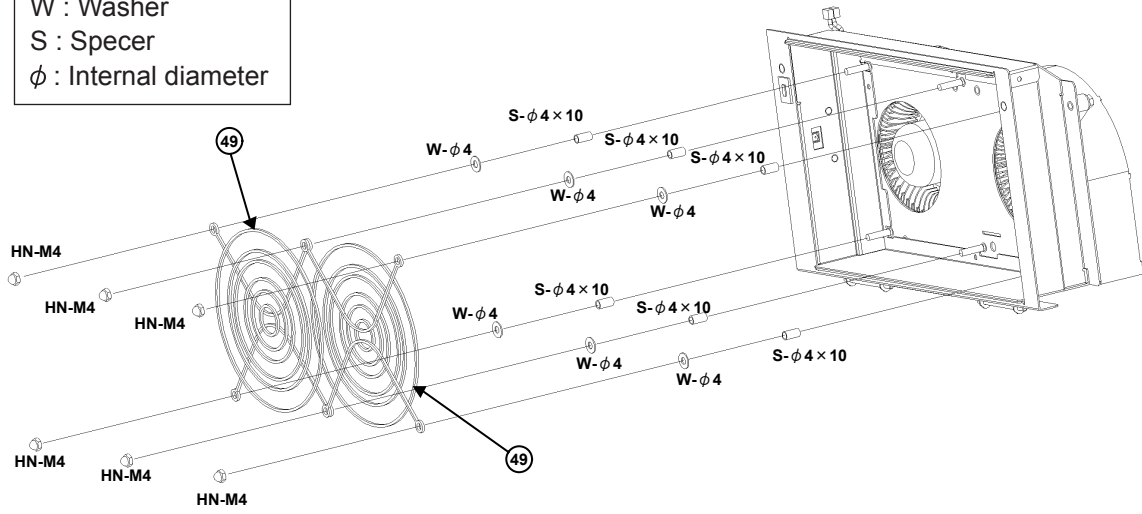
M : Meter screw  
N : Nut



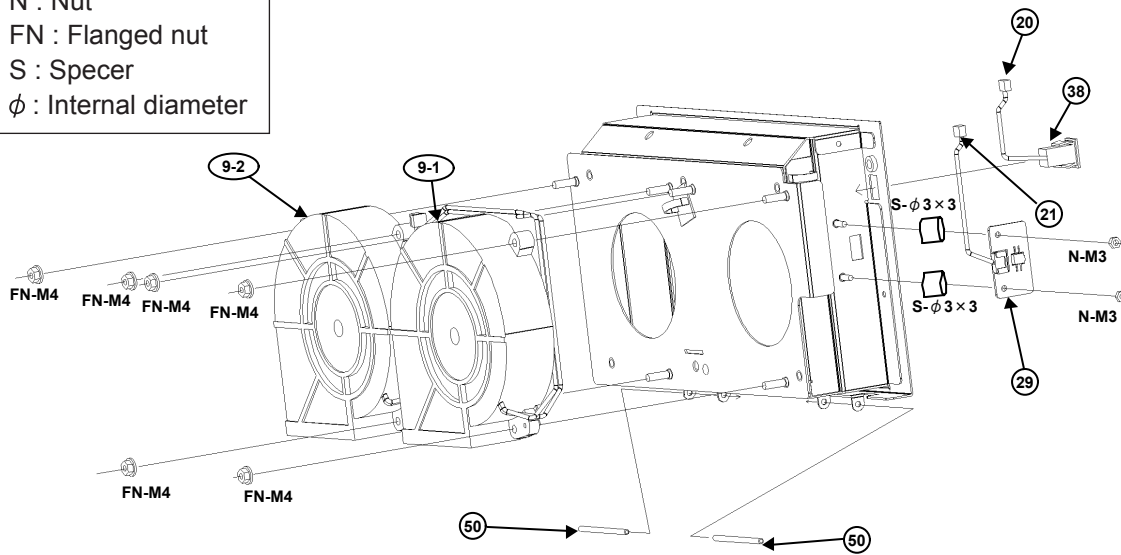


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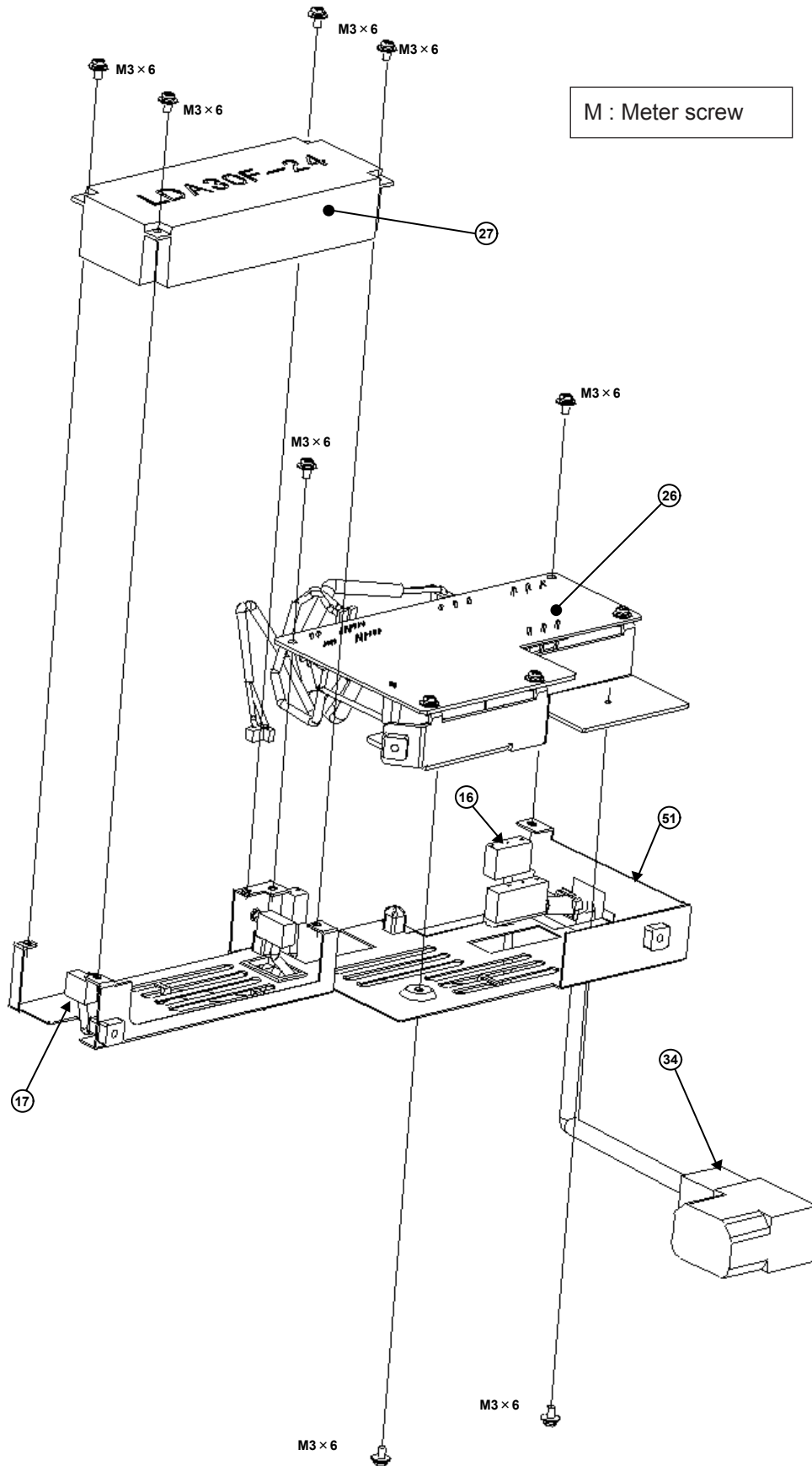
M : Meter screw  
 HN : Cap Nut  
 W : Washer  
 S : Spacer  
 $\phi$  : Internal diameter



M : Meter screw  
 N : Nut  
 FN : Flanged nut  
 S : Spacer  
 $\phi$  : Internal diameter



# SRC-101

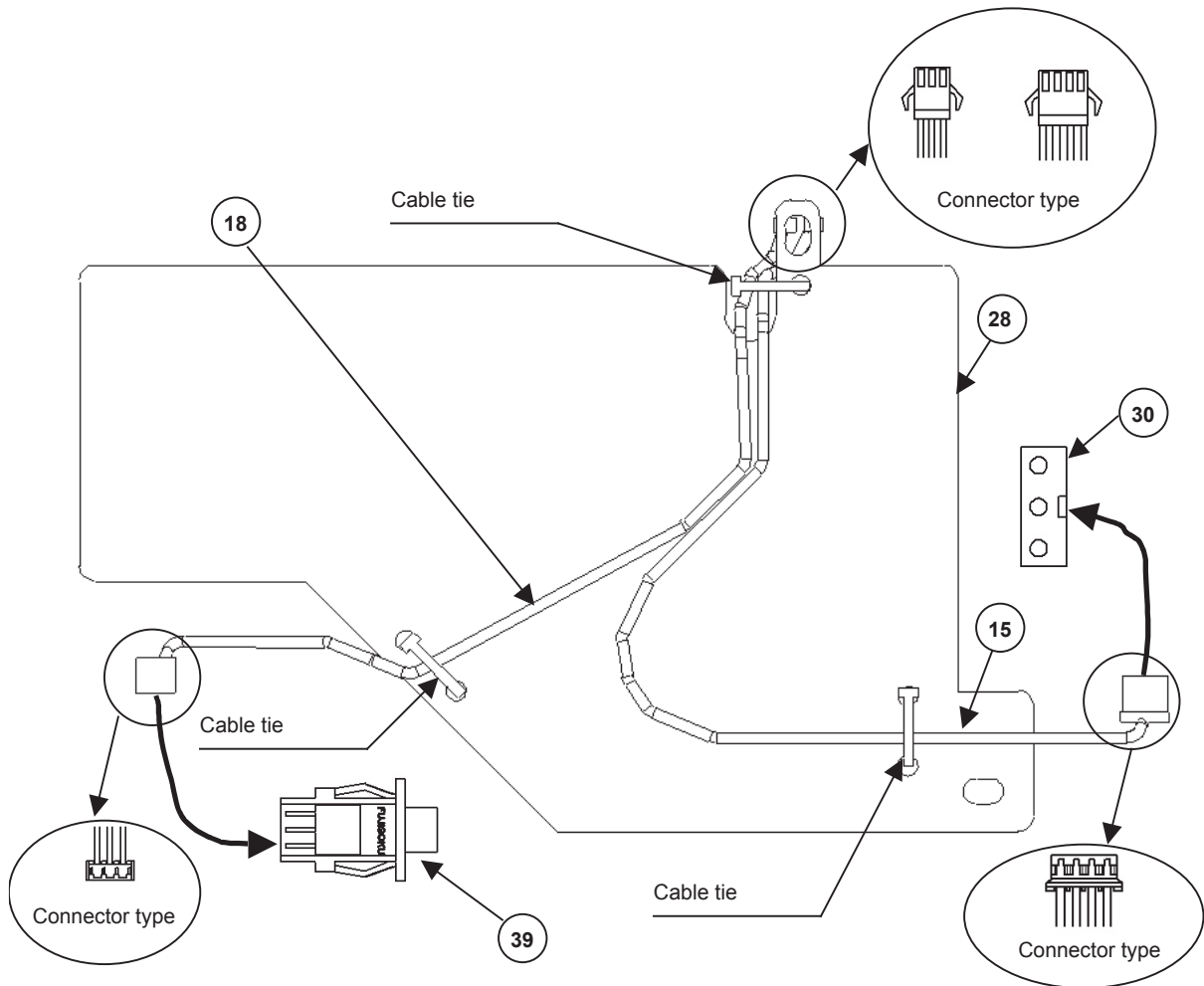


## 9. Connection diagram (Wiring diagram)

### 41 Assembly (Connection diagram)

Attach 15 18 to 28 with cable ties. (See diagram)

(Align connector shapes properly when inserting)



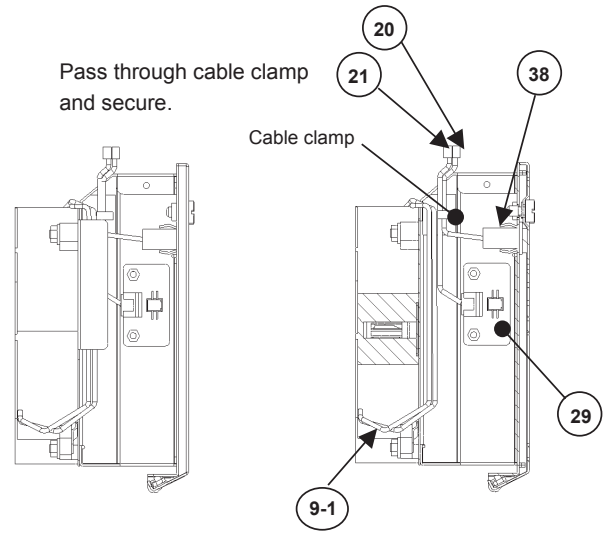
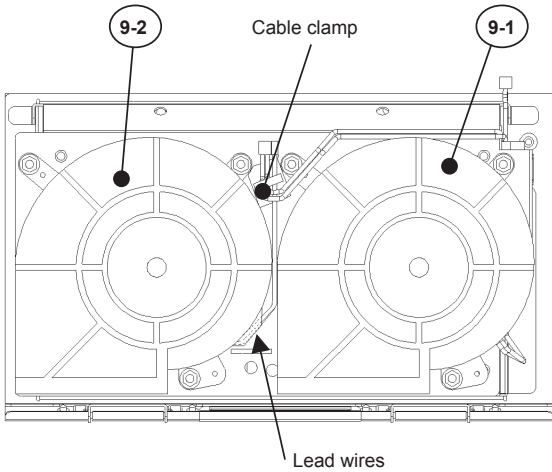
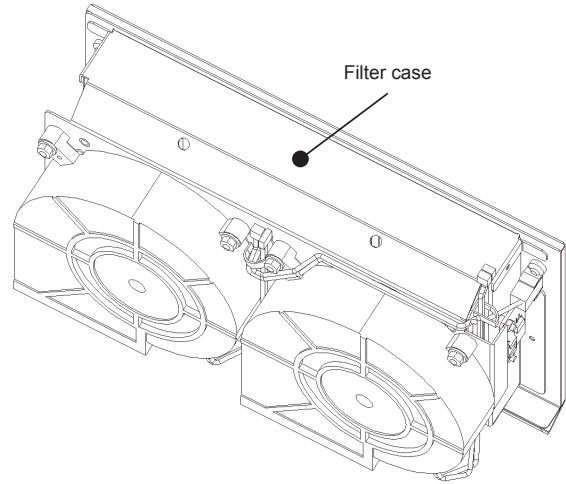
After completing the above, attach 41 39 30 onto 1 (See exploded view). Connect connectors 18 15 to 30 39.

**6 Assembly (Connection diagram)**

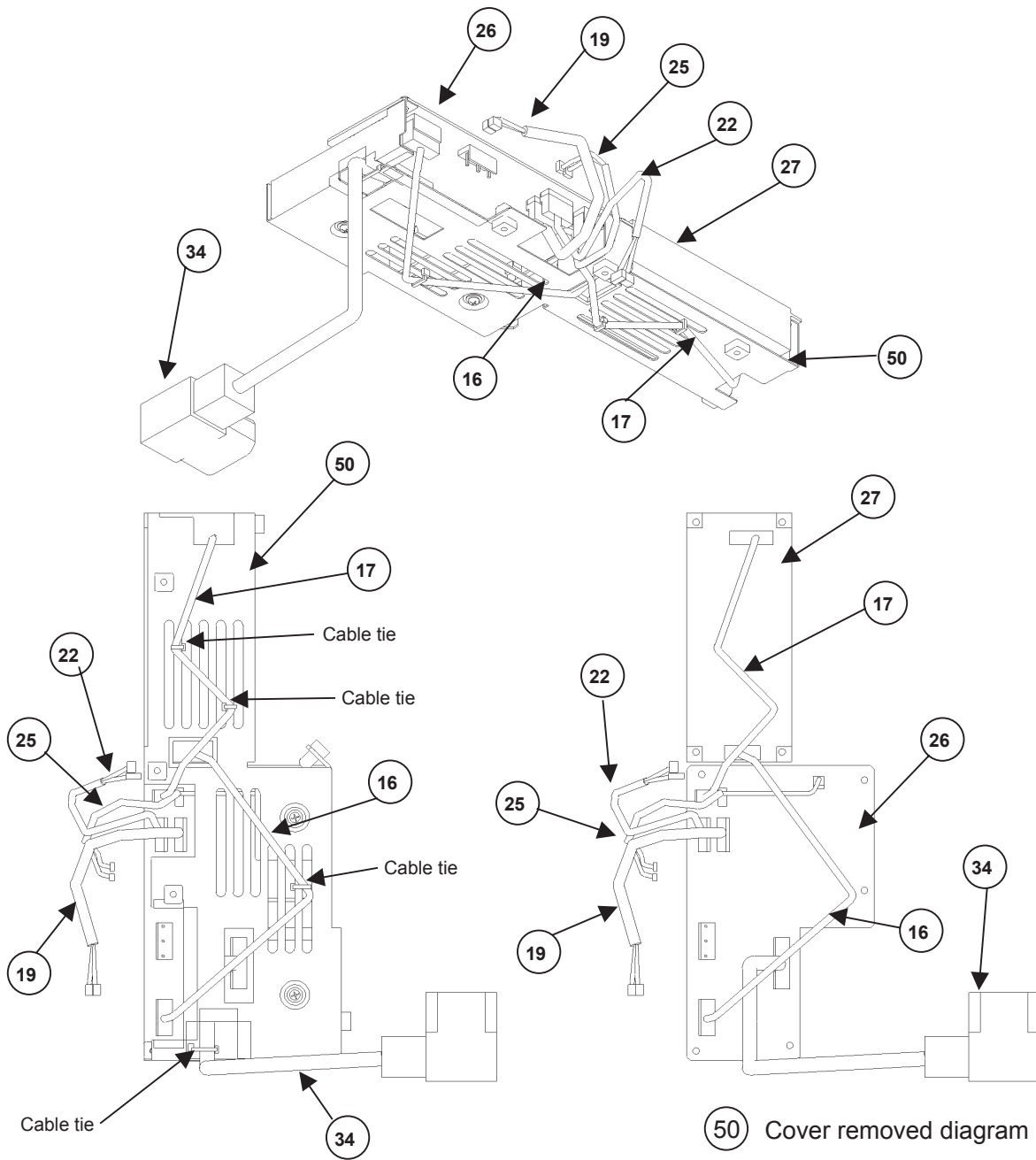
1. Attach (9-1) (9-2) onto filter case. (Align properly when attaching)
2. Pass lead wires (9-1) (9-2) as shown in diagram and secure with cable clamp.

**Caution 1: Secure lead wire (9-1) with cloth tape (NITTO No. 156A) at exit (9-1).**

3. Fit (38) into filter case and connect (20).
4. Connect (21) to (29) and attach onto filter case.
5. Pass (20) (21) through cable clamp and secure.



40 Assembly (Connection diagram)



1. Attach 27 to 50.
2. Pass 34 through 50.
3. Connect 25 to 26 and attach to 50.
4. Connect 17 16 to 26 27.
5. Secure 16 17 that are connected with 4 to 50 with cable ties.  
(Within 5mm of attachment surface of 50)
6. Connect 22 19 to 26.

### Connection of earth wire

1. Connect earth wire (24) to screw (5).
2. Connect earth wire (23) to screw (5).

**Caution 1: Connect as shown in diagram A.**

**Caution 2: See diagram B for location.**

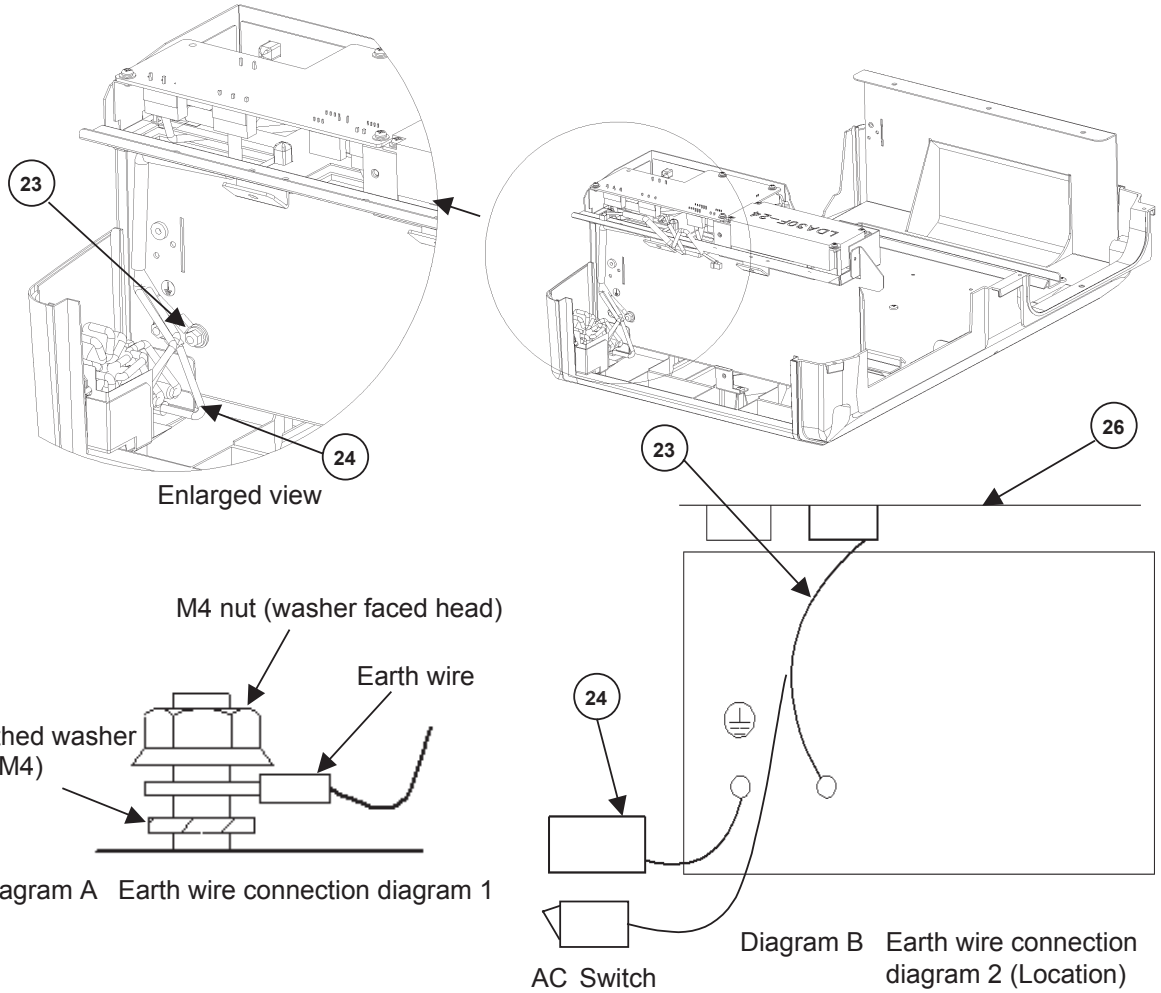
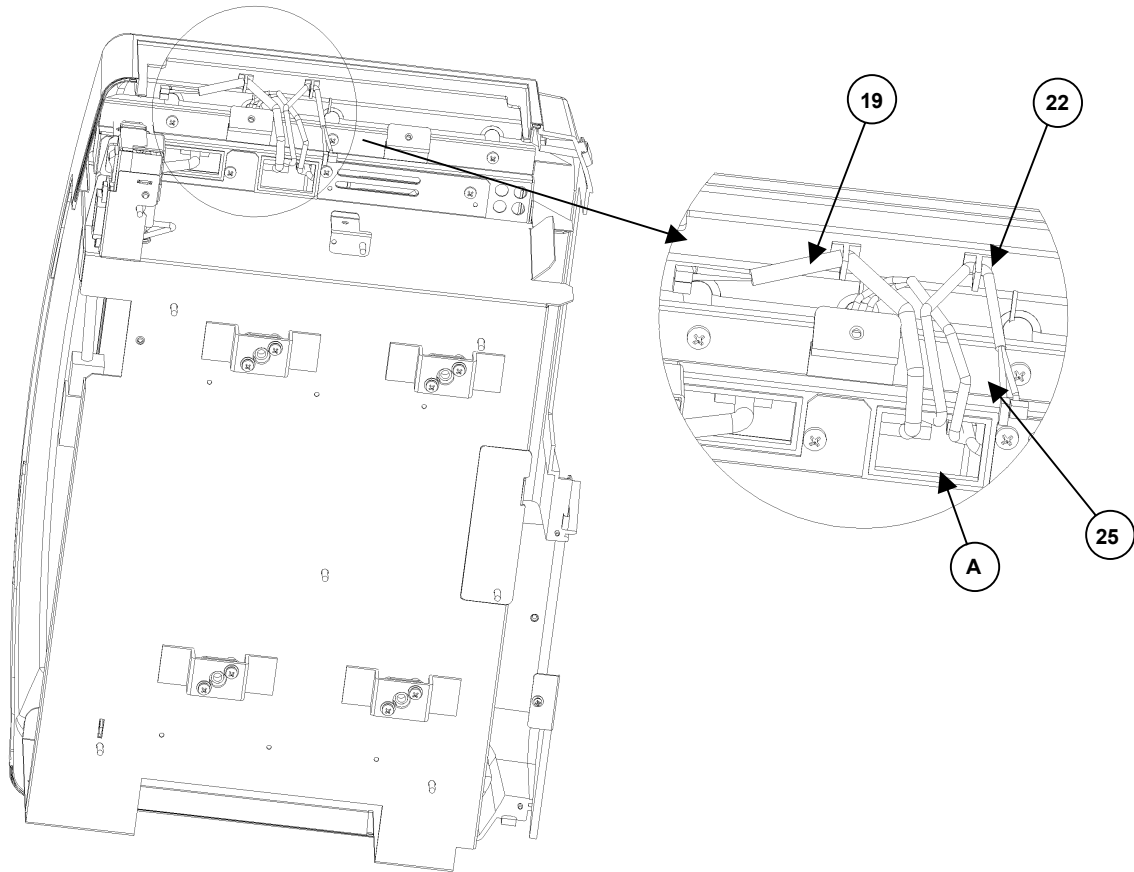


Diagram A Earth wire connection diagram 1

Diagram B Earth wire connection diagram 2 (Location)

Connection of lead wire from ④①



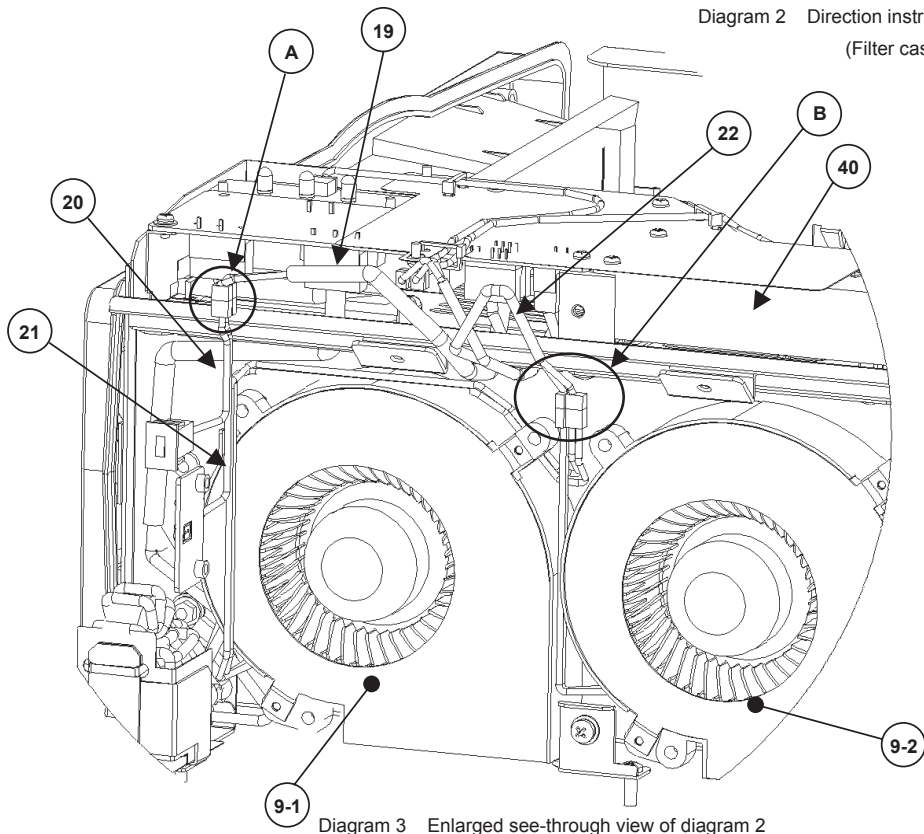
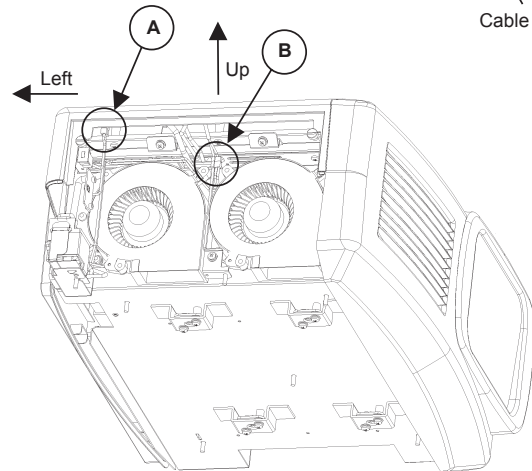
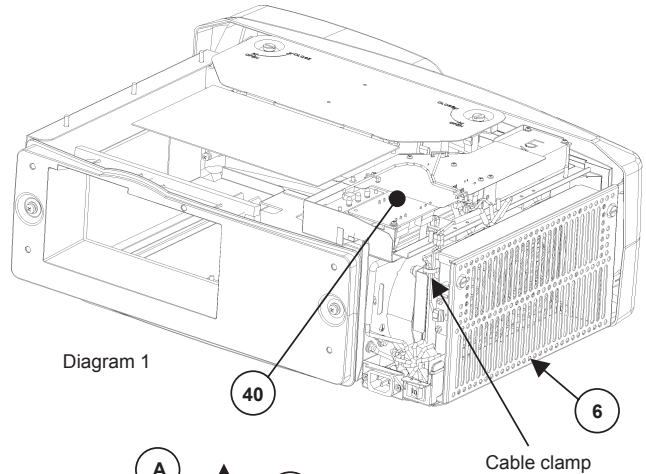
1. Pull ②⑤ ①⑨ ②② from ④① out of hole ①A. (See exploded view for attachment)
2. Connect ②⑤ to ①⑧ ①⑤ from the ④① attached to ①.
3. Secure ①⑨ ②② with cable clamp so that ②⑤ is held underneath as shown in the enlarged view.

### Attachment of ⑥ to main unit (Connection diagram)

1. Connect connector ⑲ from ④① to connectors ⑳ ㉑ from ⑥. (Part A)
2. Connect connector ㉒ from ④① to connectors ⑨-1 ⑨-2 from ⑥. (Part B)
3. Viewing from the attachment side, push part A up and left, push part B up, then attach ⑥.

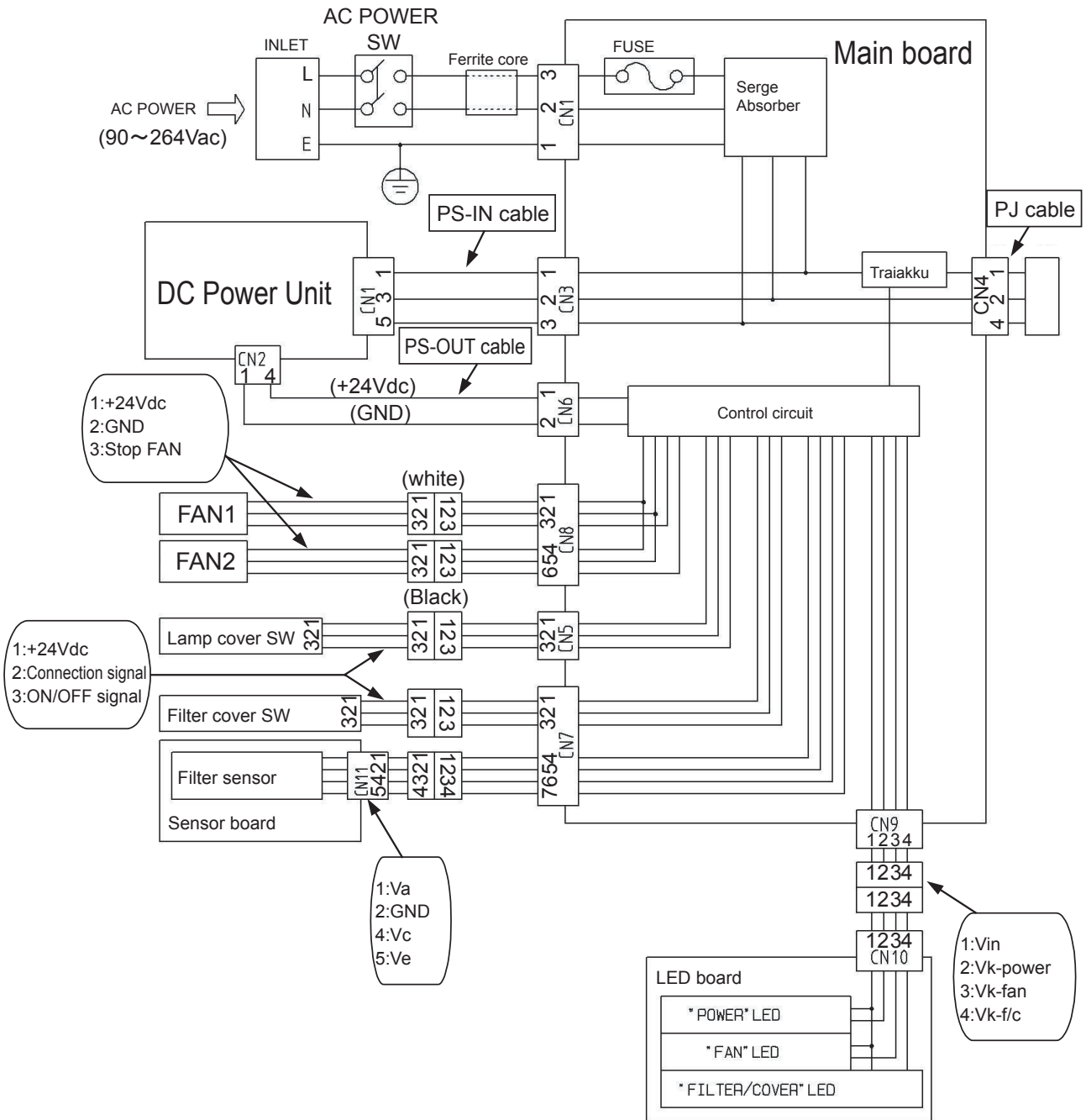
**Caution 1: Ensure cable clamp ⑥ (see diagram 1) does not become undone.**

**Caution 2: If ⑥ cannot be attached smoothly, do not apply force as it may be caught. Remove ⑥ and check the position of parts A and B before retrying.**

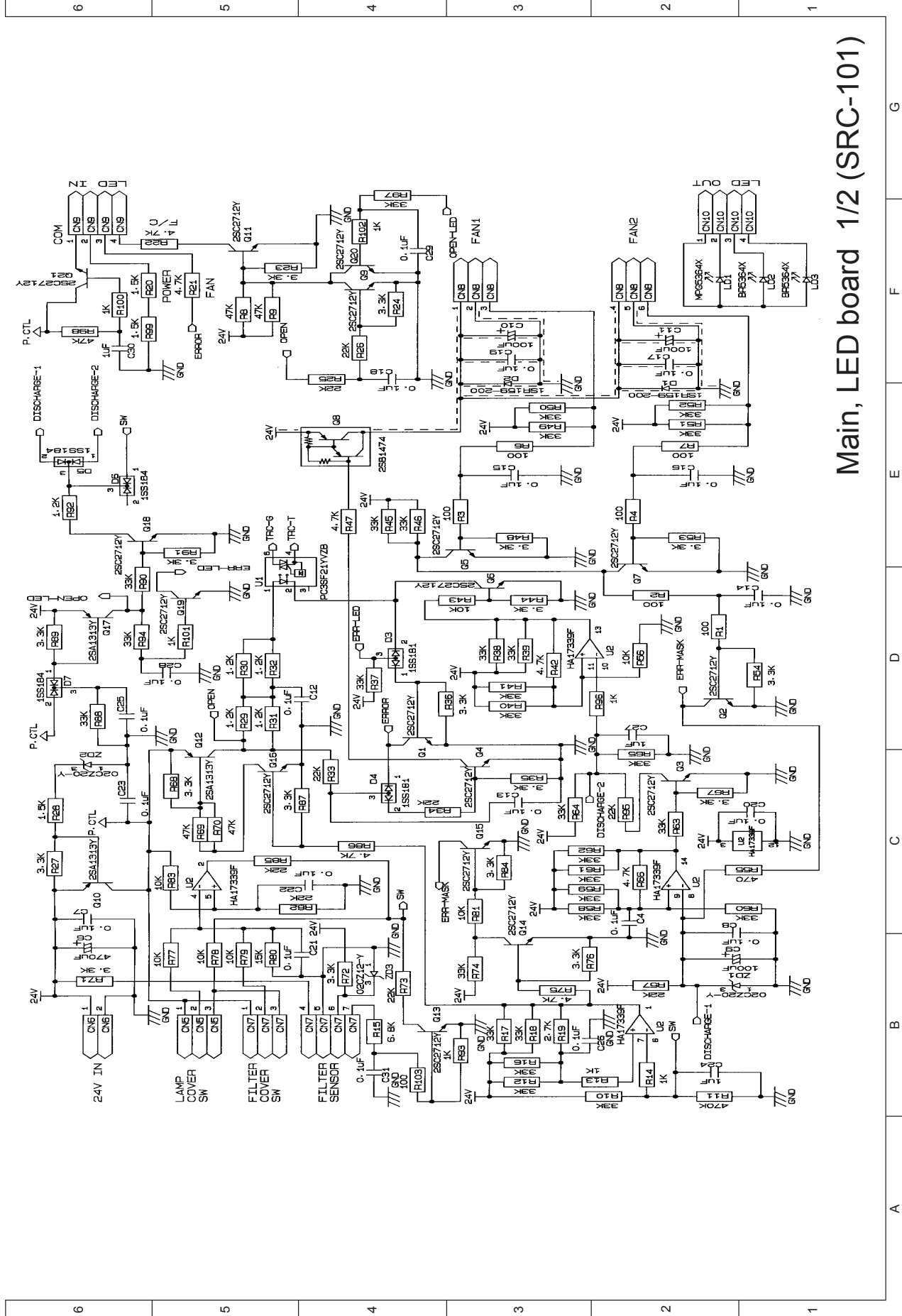




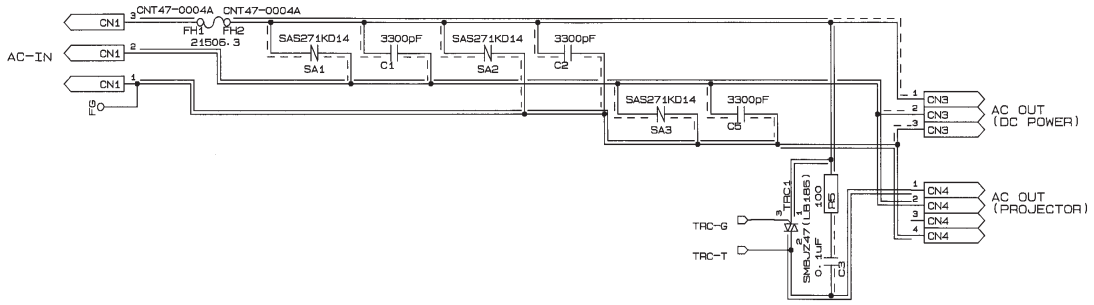
### 10. Block diagram/Connector connection diagram



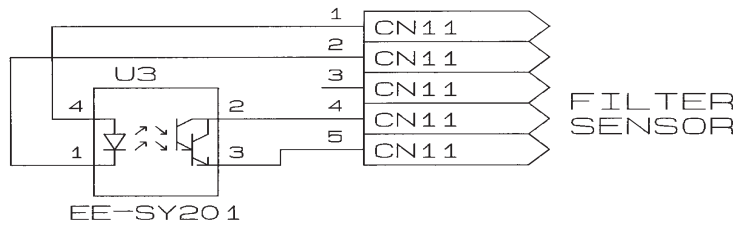
# 11. Basic circuit diagram



Main, LED board 1/2 (SRC-101)

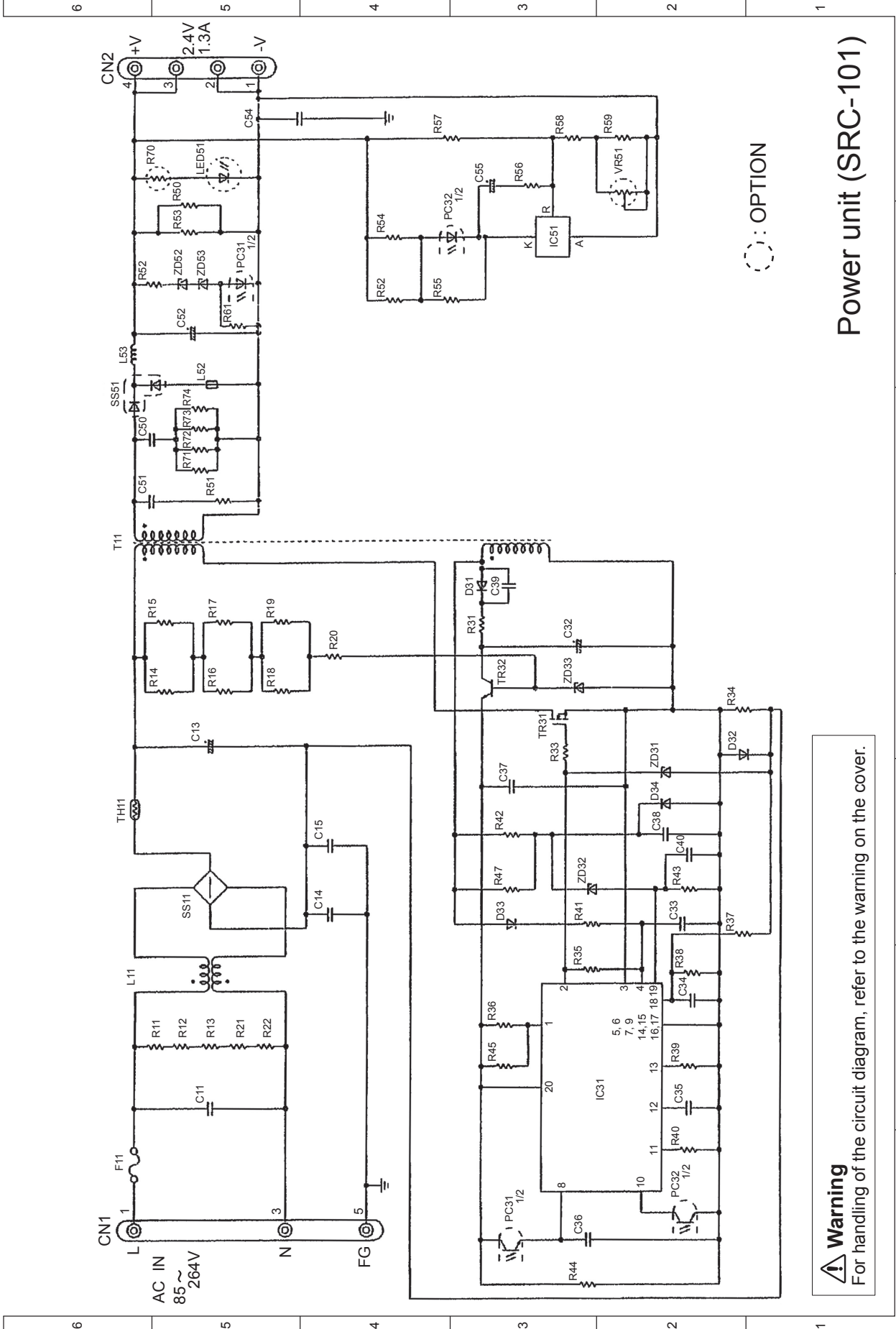


Main, LED board 2/2 (SRC-101)



Sensor board (SRC-101)

A B C D E



**Warning**  
For handling of the circuit diagram, refer to the warning on the cover.

Power unit (SRC-101)

OPTION

## 12. Filter maintenance/Changing period/Purchasing

### ● Filter maintenance

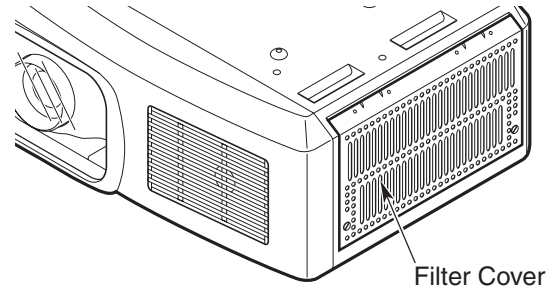
When the Liquid Crystal Projector is used for 100 hours, the LAMP indicator and the Temp indicator may flash red at the same time, and a display such as "Please clean the air filter" may be displayed when the power is turned on.  
Please clean the filter of this unit at this time.

# 1

Turn off the power of the unit and take out the power cable.

# 2

Clean part of the filter from above the filter cover with a cleaner.



# 3

Turn on the power for the unit and initialise the filter timer using the Liquid Crystal Projector USER'S MANUAL.

### ● Filter changing period

**Changing the filter after approximately one month (a total of 300 hours use at ten hours a day) is standard.**

Please take care as the filtering effect may deteriorate if the filter is not changed over a long period of time.

#### NOTE

This filter reduce harmful smoke fumes by absorbing Nicotine and Tar and filtering out air contaminated by cigarette smoke, However, even if you replace the filter periodically, Nicotine and Tar will slowly build up within the projector. This Smoke Resistant Case with a filter reduce the speed to buildup to about one fifth(\*) of that of the Smoke Resistant Case without a filter units, but the filter cannot completely protect the interior of the projector from such buildup.

(\*: Approximately one fifth. The exact speed of buildup depends on the environment in which the projector is used.)

### ● Purchasing a filter for changing

Please contact the reseller of this unit or service desk and be sure to quote the following product name when ordering (refer to the Liquid Crystal Projector USER'S MANUAL).

**Filter type ( one of ): SF-101**

# HITACHI

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**SRC-101 YK No.0544E**

**Digital Media Division**